UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

October 6, 2009

Mr. Mark Lewis
Superintendent
Biscayne National Park
9700 SW 328th Street
Homestead, FL 33033

RE: Biscayne National Park Fishery Management Plan (FMP) and Draft Environmental Impact Statement (DEIS), CEQ No. 20090286

Dear Mr. Lewis:

Pursuant to National Environmental Policy Act (NEPA) Section 102(2)(C) and the Clean Air Act (CAA) Section 309, the U.S. Environmental Protection Agency (EPA) has reviewed the referenced Biscayne National Park FMP and DEIS. Consistent with EPA's rating system, EPA rates this proposed action as "EC-1" as in "Environmental Concerns" with the recommendation that additional information be provided in the final EIS to better explain the environmental impacts. The EC aspect of this rating is based on two things: 1) the DEIS as written does not fully explain whether the need will be addressed and no detrimental environmental impact will occur to the fishery resource and 2) the DEIS states the Park's fishery resources are extremely stressed and need special attention.[1]

Background

The Biscayne National Park (Park) is located in southeast Florida and encompasses an area of 173,000 acres (290 mi^2) of which 164,000 acres (95 percent) constitute a diversity of marine habitats: sea grass meadows, hard-bottom communities, expansive coral reefs, sand and mud flats, mangrove fringes, and the water column. Within the Park are over 100 species targeted by commercial and recreational fisheries. Economically the bait shrimp fishery followed by guided sport fishing, primarily for bonefish, are the most important commercial fisheries within Biscayne Bay (Bay). Estimates are that 12 full-time guides and 36 part-time guides use the Park.

This Park has been designated by the South Atlantic Fishery Management Council (SAFMC) as Essential Fish Habitat (EFH) and a Habitat Area of Particular Concern (HAPC) for spiny lobster and coral (elkhorn and staghorn corals) and EFH for penaeid shrimp, the snapper-grouper complex, and coastal pelagic fishes. The Park also provides habitat for Endangered Species Act (ESA)-listed species: smalltooth sawfish, manatees, sea turtles (loggerhead, green, and hawksbills), bald eagles, and Acroporid corals. Additionally, most of the Bay is a lobster sanctuary.

[1] P. vii

The Park's coastal bay and coral reef habitat play a critical role in the function and dynamics of the larger Florida Keys coral reef ecosystem as it provides a safe harbor for larvae and juveniles from offshore spawning adults and produces adult fish and macroinvertebrates that migrate and replenish habitats outside the Park. The Park's mainland shoreline is almost entirely mangroves and is the longest unbroken chain of mangroves along Florida's east coast. The US Fish and Wildlife Service (FWS) estimated at least 1,300 species rely on mangroves for important habitat. Additionally, two types of coral reef communities are present in the park: inshore patch reefs and the offshore platform reef tract.

Congress established the Biscayne National Monument (Monument) to preserve and protect a rare combination of terrestrial, marine, and amphibious life in a tropical setting of great natural beauty for the education, inspiration, recreation and enjoyment of present and future generations.[2] The Monument was expanded to include 8,738 additional acres of land and water into its current size and re-designated as the Biscayne National Park. Congress also recognized the unique and special values of the Park's resources and their vulnerability to destruction and damage due to the easy human access by water. Congress directed NPS to manage this area in a positive and scientific way in order to protect the area's natural resource integrity and to keep the Park waters open to fishing in conformity with Florida's laws. Additionally, the Park's enabling legislation provides for the continued allowance of fishing.

Purpose and Need

According to the DEIS, the Park's fishery resources are extremely stressed and need special attention.[3] Numerous fish species within the Park are under considerable fishing pressure and in some cases are regionally *overfished* or subject to *overfishing* as defined by the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA). Seven species of fish (five grouper species: goliath, Nassau, red, gag, and black groupers, red drum, and speckled hind) are listed as *overfished* or subject to *overfishing* in South Atlantic waters by the SFMC. Data are insufficient to determine the fishery status for over 20 fished species. Of the 17 species for which fishery data are available, 71 percent appear to be *overfished*. Four of five grouper species, five of six snapper species, barracuda, and two of five grunt species are below the spawning potential ratios that constitute *overfishing*.

The size structures of highly desirable reef fishes (i.e., groupers and snappers) are particularly truncated in the Park relative to outside areas with lower fishing pressure. For 14 of 35 analyzed species, the minimum size harvest is lower than the reported minimum size where 50 percent of individuals are sexually mature. Over the past 25 years, the average size landed was near the minimum size for all harvested species. For example, the average black grouper is now 40 percent of its 1940 measurements and its spawning stock appears to be less than 5 percent of its historical maximum. These are clear indicators that current harvesting levels are not sustainable for these species.

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[2]P. 1
[3]P. vii

Alternatives

To accomplish its purpose, the proposed action evaluated five alternatives: 1) maintaining the status quo (no action), 2) maintain Park fisheries at or above current levels, 3) improve Park fisheries over current levels, 4) rebuild and conserve Park fishery Resources, and 5) restore Park fishery resources. Alternative 4 is the preferred alternative while Alternative 5 is the environmentally preferred alternative. According to the DEIS, the preferred alternative's proposed management actions would offset the effects of increased human population growth, improved fishing technology, and increased recreational bycatch by increasing park fishery populations by at least 20 percent over current levels. The environmentally preferred alternative's proposed management actions would offset the effects of increased human population growth, improved fishing technology, and increased recreational bycatch by increasing park fishery populations to within 20 percent of the historic, pre-exploitive levels.

EPA Concerns and Recommendations

As acknowledged in the DEIS, Park fishery resources are stressed from regional overfishing. One of the main indicators of such fishing pressure is that large specimens have been selectively extracted[4] such that mature, large and fecund females are no longer providing their significant contribution to recruitment. At least 14 fishery species[5] are being harvested at a size before they average sexual maturity (size of first maturity), so that these species cannot sustain their population. However based on the current reduced population levels, fishery stocks must not only sustain the existing population but actually expand (restore) it back to sustainable levels. Consequently the FMP should contain fishery management measures than result in restoration to sustainable populations.

According to the DEIS, implementation of any of the action alternatives (3-5) may improve the fishery resources of the Park above current levels. However, EPA recommends the Park restore fishery stocks to sustainable levels, at a minimum, consistent with language in EO 12962.[6] Therefore, EPA's primary concern with the DEIS is that the varying levels (percentages) of recovery presented for the alternatives – including the preferred alternative – are not related back to sustainability.

We offer the following recommendations for your consideration in the Final EIS (FEIS):

Recommendation: EPA recommends that the National Park Service (NPS)/Park define a *sustainable* level of harvest for the Park in its selected preferred alternative and discuss how to implement it in the FMP. EPA particularly recommends that popular impacted fishery species – such as the grouper-snapper complex, hogfish and spiny lobster – be brought back to a sustainable level of harvest. Alternatively, the Park may wish to select a recovery at a level *beyond* the defined level of sustainability to enhance the Park experience for visitors (i.e., more fish for fishers to catch-and-release and more fish/other marine life for divers to observe in the wild in their natural habitat).

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[4] P. 30

[5] P. vi.

[6] *... recreational fishing shall be managed as a sustainable activity in national wildlife refuges, national parks, national monuments, national marine sanctuaries, marine protected areas, or any other relevant conservation or management areas or activities under any Federal authority...*

Recommendation: because as written, the DEIS/FMP appears unclear how its alternatives meet the proposed action's purpose and need, resolve the fishery impacts, contains inconsistencies, and lacks sufficient environmental information to support its conclusions, EPA has provided the detailed enclosed comments for consideration in the FEIS.

For example, the alternatives presented and evaluated appear to represent an escalation of fishery management measures for commercial and recreational fishery restrictions that are primarily focused on the invertebrates, not the finfish. For example, the DEIS states that most "commercial fishers in the park target invertebrates (spiny lobsters, blue and stone crabs, and shrimp), and decreases in the number of commercial fishers would likely have minimal effects on the mean size and abundance of targeted fish species in the park."[7] However alternatives 2, 3, 4, and 5 implement a commercial permit system, the details of which are omitted from the DEIS, leading EPA to assume that the purpose of the commercial permit is to reduce the number of commercial fishers, which would be expected to reduce the impacts to targeted invertebrates.

However according to the DEIS despite using different management actions, Alternative 1[8] (no action), Alternative 2 (current status) and Alternative 3 (10 percent improvement),[9] all have the same environmental impacts, i.e., *would not cause impairment, would likely lead to minimal change in mean density or size of individuals of invertebrate populations* upon the Park's invertebrate species. Yet both Alternative 2 and 3 implement a commercial permit system and Alternative 3 adds the recreational-user permit system, establishes a crab-trap-free zone, and bans the two-day recreational lobster sport season.

Furthermore because the DEIS appears to convey numerous unsupported "ifs" in its analysis, it is unclear what the environmental impacts will be. For example in the DEIS discussion of Alternatives 3 & 4, the abundance and size of targeted fish could be positively affected *if* the recreational use permit system resulted in decreased fishing effort. Similarly in Alternative 4, *if* the non-transferable commercial-use permit system results in decreased fishing effort in the Park, then size and abundance of targeted species could increase. Also, *if* the commercial guide permit system resulted in decreased fishing effort in the park, then size and abundance of targeted species could increase.

Consequently, EPA recommends the FEIS better clarify how the alternatives protect the finfish, address the inconsistencies, and provide sufficient environmental information to support its conclusions.

Recommendation: Alternatives 4 and 5 may rapidly restore the Park's fishery resource to the maximum extent of the action alternatives presented. Although EPA generally supports these two alternatives, not all aspects of Alternative 5 may be needed for a reasonable Park recovery. Moreover, consistent with EO 12962, we also believe that the level of restoration should be a harvest that is "sustainable" – if not a lesser harvest resulting in a larger fishery resource and a greater Park experience (we note that the DEIS does not relate the levels of restoration for Alternatives 3-5 to a sustainable harvest). Accordingly, EPA has provided several fishery management measures in the enclosed comments that should be considered for whatever final

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[7] P. 56
[8] P. 61
[9] P. 62

preferred alternative is selected in the FEIS (these measures include commercial fishing/permits, size limitations, sport spearfishing/lobstering, catch-and-release fishing, coordination outside the Park, performance measures and monitoring, and enforcement). For the FEIS, NPS and the Park may wish to amend Alternative 4 or 5 to include these measures, or consider adding a hybrid "4/5" alternative bracketed by Alternatives 4 and 5.

Recommendation: To determine an appropriate metric to define a "sustainable" harvest, EPA recommends consultation with the National Marine Fishery Service (NMFS), FWS, NPS, their state counterparts such as the Florida Fish and Wildlife Conservation Commission (FWC), and the Park staff. If relevant for the commercial and/or recreational fisheries of the Park, such a metric of sustainability might be a traditional harvest level such as the Maximum Sustainable Yield (MSY) for each stressed fishery species within the Park. EPA would consider MSY as the minimum target for Park recovery. Ideally, the level of harvest could be further reduced beyond an MSY recovery to restore populations to above sustainable levels such as the Optimum Yield (OY) to increase the Park experience.

Recommendation: To the extent feasible, commitments should be made in the Record of Decision (ROD) – but preferably in the FEIS – for the implementation of fishery management measures that reach the recovery goals of each alternative presented, particularly for the preferred alternative in the FEIS. Moreover, the monitoring, performance measures and enforcement of the fishery management measures of the selected FMP should be further discussed in more detail in the FEIS and ROD. FEIS should also address the societal/economic impacts to commercial fishers, especially if there are any fishers from minority and/or low-income populations. Impacts to any subsistence fishers using the Park should also be addressed.

Recommendation: The FEIS should explain any possible unintended environmental consequences to stressed Park fisheries associated with the preferred alternative's commercial permit's non-transferrable clause. The concern is that the "non-transferable clause" could have the unintended consequence in encouraging more people to apply for permits than otherwise would have because of the intent to decrease the number of permit holders, and to force "use" as defined in the DEIS to maintain the permit when the permit holders otherwise would not have such pressure to fish. Consequently, a permit-induced pressure may occur causing depleted fishing stocks additional fishing pressures that may hinder any and all of the goals represented by Alternatives 2 – 5.

Recommendation: The FEIS should explain using environmental information how the proposed recreational-user permit system will realize a positive impact on the size and abundance of targeted invertebrate species populations. In its explanation, the FEIS should address the following DEIS statements: 1) most commercial fishers in the Park target invertebrates,[10] 2) approximately 30 percent of the Park's visitors are recreational fishermen,[11] and 3) the recreational harvest of invertebrates is minor in scale relative to commercial harvest such that any effect of the reduction in recreational effort would likely be small.[12]

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[10] P. 56
[11] P. 31
[12] P. 62

Recommendation: The FEIS discuss whether a disproportionate burden is being placed on the recreational fisher by implementing a recreational-user permit and eliminating the recreational lobster sport season when the commercial fisher appears to have the greater fishery impacts. And if a disproportionate burdened is indeed being placed on the recreational fisher, the rational for this burden placement should be discussed.

Recommendation: The FEIS should discuss how implementing alternatives 2 and 3 would realize the same invertebrate impacts as the no action alternative. This finding appears to contradict the DEIS finding that the implementation of a recreational-use permit system (Alternative 3) could discourage recreational harvesters of targeted invertebrate species from harvesting in the park, and therefore, realizing a positive impact on the size and abundance of these populations.[13] Additionally, it reinforces the concern that recreational users may be disproportionately burdened by the implementation of Alternative 3, having the recreational-user permit, does not appear to realize any different impact than Alternatives 1 and 2. This issue is raised as the preferred alternative appears to build upon Alternative 3 actions, which in turn appears to build upon Alternative 2 actions, which in turn builds upon Alternative 1 actions.

Thank you for the opportunity to review this DEIS/FMP. Should you have questions regarding these comments, please contact Beth Walls (at 404-562-8309 or walls.beth@epa.gov) or Chris Hoberg (at 404-562 – 9619 or hoberg.chris@epa.gov) of my staff.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Enclosures:
EPA rating criteria
EPA detailed comments

[13] P. 61

EPA Comments on NPS BISC FMP/DEIS

EPA-Recommended Fishery Management Measures

Although EPA supports Alternatives 4 and 5 as providing the greatest fishery benefit of the action alternatives presented in the DEIS, we recommend that NPS and the Park consider amending Alternative 4 or 5 in the FEIS to include these measures, or consider adding a hybrid alternative bracketed by Alternatives 4 and 5, as appropriate. We offer the following comments and fishery management measures, several of which are already considered in some form in the DEIS:

Commercial Fishing

EPA recommends that no new commercial fishing be allowed in the Park (not even through a limited entry or lottery system proposed in Alternative 5[1]) and that all existing commercial fishing within the Park be phased out on a fairly rapid timetable.

If infeasible from a fisher impact perspective, some limited and enforced exceptions to minimize these societal impacts (especially any Environmental Justice (EJ) fishers) could be considered: 1) designation of exclusion zones on traditional fishing grounds within the Park that are defined by the NPS/Park staff, but no or minimal shrimp boat trawling (and only in designated sandy areas previously trawled) due to bycatch[2] and Biscayne Bay bottom impacts; 2) continuance of some charter/party boat trips to provide the Park with some continued revenue, but only with the stipulation that all trips and catches would be limited in terms of the number of trips per week, catch per species per day, catch minimum size limits, and any other measures that should be identified in the FMP, based on studies and recommendations by the resource agencies and the Park staff (also see EPA's suggested fishery management measures provided below), 3) continuance of limited use of traps (spiny lobster and stone/blue crabs) but only outside designated CRPAs or similar hard- or live-bottom areas including seagrasses such as *Thallassia* beds. Some of these measures could be tried on a voluntary basis; however, if unsuccessful, they should become mandatory and enforced within a short timeframe so that recovery can proceed.

Commercial Permits

EPA recommends that any commercial fishing require a limited-entry, Special Use Permit subject to renewal each year. All permits would be non-transferable and would be subject to a

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[1] P. 26

[2] Bycatch can include juveniles of commercial and ecological species, common marine species that are part of the Park ecology and visitor experience (starfish, brittle stars, puffers, sea urchins, etc.), endangered sea turtles (Note: all shrimp nets must be equipped with Turtle Exclusion Devices or TEDs approved and inspected by FWS), and broken pieces of endangered Acroporid corals. All bycatch should be released in the event some specimens (e.g., certain fish and hard shelled mollusks and crabs) could survive the trauma of trawl capture.

use-or-lose policy where permits would become invalid and non-renewable (after the one-year term) if there were no recorded landings or – as a fallback – only insignificant recorded landings were made at a threshold level determined by the resource agencies and BISC staff. Permit monies could be used by the Park for enforcement of the FMP or other similar uses such as compliance assistance, monitoring or onboard observers (e.g., charter/party boats, commercial vessels), and education of fishers and other visitors regarding recovery, compliance and conservation.

Size Limitations

EPA recommends, consistent with several of the DEIS alternatives, that the resource agencies and the BISC staff designate and enforce minimum size limits (fork length for finfish and carapace width for crustaceans) for all target species of concern within the Park. Existing limitations may need to be increased for recovery. The selected FMP should document and detail such size limitations. Implementation of a minimum size would help ensure that only specimens greater than the average size of first maturity are harvested. It is clear that such size designations cannot be less restrictive than any local, existing, federal FMP for specific commercial and/or sport species; however, they could be more restrictive for the purposes of Park recovery.

Other Fishery Management Measures

EPA recommends in addition to minimum size limitations, that the resource agencies and Park staff also consider implementing other management measures as necessary to quickly restore stocks to sustainable levels or above. We note that several potential management measures were provided for Alternatives 2[3], 3[4], 4[5] and 5[6] that would be considered by the Park and FWC.

EPA considers such detail essential to the FMP. In general, these are effective and traditional measures including increasing minimum harvest sizes, bag limits, seasonal or spatial closures, prohibition of extractive fishing (catch-and-release only), temporary moratoriums, etc. The FEIS should fully describe the measures to be implemented and provide more certainty as to what measures will be, or will likely be, implemented. The prospective ROD should state this with even more certainty and detail. To the extent feasible, commitments should be made in the ROD (preferably the FEIS) that these measures will be implemented to reach the recovery goals of each alternative presented (particularly for the preferred alternative at the FEIS stage).

With regard to implementing fees for permits or fishing license stamps (e.g., a $2 recreational fishing license stamp for Alternative 2), we note that such monies can be useful to enforcement and education (as discussed above) but do not necessarily restore the resource *per se* from a fishery management standpoint. That is, although subsistence and some recreational

[3] P. 17
[4] P. 20
[5] P. 24
[6] P. 26

fishers may be discouraged from Park fishing by a user fee, the additional cost for permits/licenses will likely just become the "cost of doing business" unless the fees are prohibitive, and therefore still allow continued overfishing within the Park.

Sport Spearfishing

EPA recommends that spearfishing be reduced by disallowing the use of SCUBA gear by fishers (snorkel free diving only) to limit the spearfishing effort and specifically the spearing of large specimens like grouper in deeper waters. We agree that the elimination of spearfishing proposed by Alternative 5 would be an effective fishery management measure, but may not be needed for a reasonable recovery.[7]

Target species may also need to be restricted to more abundant species (species to be determined by resource agencies and Park staff) instead of hogfish and other popular species. Minimum size and bag restrictions should be designated and enforced for all species spearfished, especially if spearing hogfish and other popular species was still allowed. Size restrictions may need to be increased while per-day bag limits decreased.

Sport Lobstering

EPA recommends if the Park is not designated as trap-free, trap use should nevertheless be limited and only allowed in designated exclusion areas outside trap-free CRPAs. If sport (by hand) collection of spiny lobster (*Panulirus argus*) is allowed as a fallback within the Park, we recommend (similar to spearfishing) that only snorkel free diving be allowed for collection (no SCUBA) to reduce harvests. State of Florida minimum carapace widths (or larger if so determined by the resource agencies and Park staff) would also apply. The Park may also wish to designate a minimum carapace width for a similar but smaller congenor, the spotted lobster (*P. guttatus*). It may also noteworthy that conscientious hand collection of lobsters could avoid the illegal collection of "shorts" more so than traps which are less selective.

Sport Catch-and-Release Species

EPA recommends stressed recreational species such as grouper become more catch-and-release species to reduce the extraction of fecund females that promote stock recovery in addition to traditional catch-and-release species in the Park such as bonefish and tarpon. This approach would maintain the Park's fishing experience by allowing fishers to still catch fish, but release them to also maintain the snorkeling experience for other Park visitors and educators. However, studies should be conducted to determine the survivorship of catch-and-release specimens, since not all species will necessarily survive the trauma of capture or being rapidly raised to the

[7]From a safety perspective, however, there are benefits to eliminating spearfishing since it is a potentially dangerous sport (spear shooting, use conflicts with snorkelers, etc.) and can also be a shark attractant due to blood releases and dispersion in the water column.

surface from deeper waters (although Biscayne Bay is not deep). If survivorship is high, catching and releasing specimens might still be possible after bag limits or fishing quotas have been reached.

Although not popular with sport fishers, the use of circle hooks (instead of J-hooks) could also be tried to increase the survivorship of catch-and-release specimens. If any existing commercial fishers are allowed to use hook-and-line gear within the Park, circle hooks would likely increase the survivorship of their bycatch of non-target species or undersized specimens of target species (regulatory discards).

Outside Park Coordination

EPA recommends the Park FMP must be coordinated with local State and County regulations and local federal FMPs regulating the same species since species inhabiting Biscayne Bay do not honor Park boundaries so that Park management measures are not inconsistent and less restrictive (as suggested above, the Park measures could nevertheless be more restrictive for the purposes of Park recovery).

Park Fisher Satisfaction

EPA recommends the minimum acceptable level of fisher satisfaction deemed appropriate by Park/NPS staff, i.e., 90%,[8] may be unrealistic during a rebuilding period intended to restore fishery stocks since harvesting sacrifices would have to be made to achieve recovery, i.e., less/no commercial and recreational landings can be expected for a longer time until recovery (e.g., pg. 26 suggests that a temporary moratorium could probably last several years). However, this need not be an issue for all visitors. We note that there apparently is a subset of visitors that do not require a large harvest in order to have a satisfactory Park experience. Based on creel surveys in the Park beginning in 2003, the level of satisfaction for Park fishers is still about 95%.[9]

Monitoring and Performance Measures

EPA strongly recommends establishing a monitoring system with specific performance measures in order to measure success of the selected FMP. Under Alternative 5, for example, we note[10] that determining achievement of the recovery goal "...would utilize the best available data for each species, likely including, but not limited to, data generated from visual census and creel surveys." We do agree with the continued use of creel surveys (started at the Park in 2003) as a general performance measure, but note that such information is primarily qualitative (data for species, size and enumeration of finfish/shellfish landed). Moreover, creel census interviews of fishers may or may not be factual for certain measures such as catch-per-unit-of-effort (C/E),

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[8] P. viii
[9] P. 31
[10] P. 26

since fishers may tend to minimize the effort (their fishing time) for their catches.[11] We therefore suggest that fishery studies also be used to better confirm increases in defining stock population factors such as numbers, size, fecundity and sustainable harvest. Such studies and associated performance measures should be coordinated with NMFS, FWS, FWC and other resource agencies.

FMP Enforcement

EPA recommends the FEIS summarize enforcement information along with license, permit and other Park user fees/requirements. The proposed use for enforcement monies collected should also be addressed. Beyond appropriate fishery management measures and monitoring, enforcement is key to Park recovery. We appreciate that *Law Enforcement* was addressed in Chapter 2. However, this discussion primarily related to educational and signage improvements more so than increases in enforcement rangers, fines, or tolerance limits, etc.

Alternatives Analysis

NEPA procedures must insure that environmental information is of high quality and reflects accurate scientific analyses to foster excellent action.[12] As written, the DEIS/FMP does not yet appear to clearly describe how the alternatives evaluated meet the identified need and resolve the fishery impacts, how the selection of the preferred alternative is supported, and how numerous conclusions are substantiated. Consequently, EPA recommends the FEIS better clarify the issues and perceived inconsistencies and provide sufficient environmental information to support all conclusions as identified in the comments below. The following comments identify examples focused on the finfish and invertebrate sections of the DEIS which may be replicated throughout the DEIS, e.g., the Acroporid corals, endangered and threatened species, etc., sections; and consequently, may not identify all incidences.

Alternative 1

This alternative is the no action alternative. Since most commercial fishers in the Park target invertebrate (spiny lobster, blue and stone crabs, and shrimp)[13] and approximately only 30% of the Park's visitors are recreational fishermen,[14] it is unclear how the implementation of this alternative will realize the following.

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[11] If fisher interview information during a creel survey does contain minimized effort data, the current fishery status of the Park may be even more impacted than anticipated since the C/E ratio of creel surveys would be higher than actual conditions.

[12] 40 CFR § 1500.1(c)
[13] P. 56
[14] P. 31

- Would not cause impairment to targeted invertebrate species and would likely lead to minimal change in mean density or size of individuals of invertebrate populations.[15]

  EPA recommends the FEIS provide sufficient information to clarify how the status quo would not impair targeted invertebrate species since according to the DEIS most of the commercial fishers target invertebrate species and the other alternatives implement a commercial permitting system to reduce the number of commercial fishers presumably to reduce the number target invertebrates fished. The no action alternative does not stop the existing commercial fishing pressure to increase or continue and since their primary target is invertebrates, why wouldn't invertebrate abundance and size distributions be affected?

- Increase the harvest of non-traditionally targeted species as the preferred finfish species abundance declines.[16]

  EPA recommends the FEIS provide sufficient information to clarify how the status quo would increase the harvest of non-traditionally targeted species as the preferred finfish species abundance declines. The FEIS should explain why finfish species abundance will decline when the commercial fishers actually target invertebrates not finfish[17] and only 30% of the fishers are recreational fishermen,[18] implying that 70% are commercial.

- Would likely lead to a substantial decrease in mean density or length of targeted finfish populations, which the DEIS states would occur for the foreseeable future and have a major, long term negative impact on and potentially lead to impairment of targeted finfish species resources.[19]

  EPA recommends the FEIS provide sufficient information to clarify how the status quo would lead to a substantial decrease in mean density or length of targeted finfish populations. The status quo would allow commercial fishery to continue and the DEIS has stated that decreases in the number of commercial fishers would likely have minimum affect on the mean size and abundance of targeted finfish species in the Park.[20]

- **EPA recommends** the DEIS discussion be expanded in the FEIS beyond recreational fishery impacts to include commercial fishery impacts including bycatch. For example the DEIS states that recreational fishing pressure would likely continue to increase as human population increases and would lead to increased by-catch resulting in negative impacts to non-target fish populations.[21] As written it is unclear whether this would be significant, particularly when compared to commercial fishery impacts.

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[15] P. 61
[16] P. 53
[17] P. 56
[18] P. 31
[19] P. 54
[20] P. 56
[21] P. 65

Alternative 2

This alternative commits to offset the effects of increased human population growth, improved fishing technology, and increased recreational bycatch by management actions designed to maintain Park fishery populations at or above current levels.

***Management actions designed to maintain current fishery levels*:**

The DEIS addresses management actions designed to maintain Park fishery populations at current levels; however, it is silent as to what these management actions are and does not provide any environmental information supporting their use. Moreover, it is unclear how maintaining Park fishery populations at current levels complies with EO 12962.

EPA recommends the DEIS discussion be expanded in the FEIS to describe the management actions use with supporting environmental data to show their potential affects toward meeting the proposed action's need and purpose and achieving with EO 12962's mandate.

***Impacts of maintaining current fishery levels*:**

The DEIS explains the potential environmental impacts of this alternative: 1) could lead to increased abundance and mean size within the Park if abundance and size decreased outside the park and 2) could lead to decreased abundance and size within the Park if abundance and size increase outside the park.[22] However, it is unclear how the proposed management actions designed to maintain the Park's existing fishery populations would cause these impacts.

EPA recommends the FEIS explain how the proposed management actions designed to maintain the Park's existing fishery populations would cause the above described impacts.

It is also unclear how the proposed management actions would likely lead to minimum change in mean density or length of targeted fin-fish populations, would help to maintain the abundance and mean size of invertebrates,[23] for the foreseeable future, would result in the maintenance of the heavily impacted fishery resources and altered conditions that exist at present, and would likely have minor, long-term negative impact on targeted finfish species and would not cause impairment of the resource.[24]

EPA recommends the FEIS provide sufficient environmental information to explain how the proposed management actions will lead to the above described improvements and prevent impairment of the resource.

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[22] P. 54
[23] P. 61
[24] P. 55

Prohibiting new commercial fisheries:

The DEIS states that new commercial fisheries would not be allowed to develop within the park. Commercial fisheries that would be allowed to continue: bait shrimp roller-frame trawl, blue and stone crab pot, spiny lobster pot and dive, ballyhoo purse seine, and pelagic and benthic hook-n-line, but no multiple-hook "long lines." The prohibited commercial fishery is the wingnet shrimp fishery, and if data indicate declining resources, additional restrictions could be placed on permitted fisheries.[25] It is unclear how prohibiting new fisheries, i.e., the wingnet shrimp fishery, will achieve the objectives of this alternative or meet the identified need for the proposed action.

EPA recommends the FEIS explain how prohibiting new fisheries, i.e., the wingnet shrimp fishery, while allowing existing fisheries will achieve the objectives of this alternative or meet the identified need for the proposed action.

Furthermore it appears that existing data documents declining resources and therefore supports the need for additional restrictions on permitted fisheries. Seven species of fish are listed as *overfished* or subject to *overfishing* in South Atlantic waters by the SAFMC. Of the 17 species for which fishery data are available, 71% appear to be *overfished*. Four of five grouper species, five of six snapper species, barracuda, and two of five grunt species are below the spawning potential ratios that constitute *overfishing*.

EPA recommends the FEIS explain how the proposed prohibition of new commercial fisheries and the continued allowance of existing commercial fisheries will achieve any population recovery of targeted finfish species.

***Commercial permit system*:**

The DEIS does not explain how the limited-entry, transferable, special-use permit will work or how it will accomplish the maintenance of Park fishery populations at current levels. This alternative contains a commitment to implement management actions designed to maintain the existing fishery status but it is unclear what management steps will be taken to achieve this should the proposed commercial permit system fail.

EPA recommends the FEIS explain how the commitment to implement management actions designed to maintain the existing fishery status will be achieved should the proposed commercial permit system realize no change, e.g., "no action" alternative results.

EPA recommends the FEIS explain how this alternative would maintain "current" levels of finfish or only have "minor" negative impacts to targeted finfish species and not cause impairment to the finfish species resource when, according to the DEIS, decreases in the number of commercial fishers would likely have minimal effects on the mean size and abundance of targeted finfish species in the Park.[26]

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[25] P. 17
[26] P. 56

Alternative 3

This alternative commits to offsetting the effects of increased human population growth, improved fishing technology, and increased recreational bycatch by management actions designed to increase park fishery populations by at least 10 percent over current levels.

***Management actions designed to increase current fishery levels*:**

The DEIS addresses management actions designed to increase park fishery populations by a minimum of 10 percent; however, it is silent as to what these management actions are and does not provide any environmental information supporting their use. It is also unclear how the differences between Alternatives 2 and 3 management actions will achieve their respective commitments, e.g., Alternative 3's proposed 10-percent increase in fishery populations. Moreover, it is unclear how the proposed 10-percent increase complies with EO 12962.

EPA recommends the FEIS discuss what management actions will be used and provide environmental information supporting their use and effectiveness toward achieving the commitment to implement management actions designed to increase park fishery populations by at least 10 percent over current levels.

EPA recommends the FEIS compare the differences between Alternatives 2 and 3 management actions and provide environmental information supporting how they will achieve their respective commitments, e.g., Alternative 3's proposed 10-percent increase in fishery populations.

EPA recommends the FEIS discuss how the proposed 10-percent increase achieves EO 12962's mandate.

***Impacts of increasing current fishery levels by 10 percent*:**

According to the DEIS, the potential environmental impacts of this alternative would lead to increased abundance and mean size within the Park if abundance and size remained at current levels or declined in areas outside the Park, or to similar mean size and abundance within versus outside the Park if mean size and abundance increased in areas outside the Park.[27] It is unclear how these impacts would be caused by the proposed management actions designed to increase the Park's existing fishery populations. Environmental data supporting these conclusions appears to be lacking.

EPA recommends the FEIS discuss how these impacts would be caused by the proposed management actions under this alternative and include environmental data supporting these impact conclusions.

It is also unclear how the proposed management actions would likely lead to an increase of approximately 10 percent in mean density and length of some targeted fish populations for the

[27] P. 55

foreseeable future and would likely have a minor, long-term positive impact on targeted finfish species and would not cause impairment of this resource.[28]

EPA recommends the FEIS explain how the determination *likely lead to an increase of approximately 10 percent in mean density and length of some targeted fish populations for the foreseeable future and would likely have a minor, long-term positive impact on targeted finfish species* was made, include supporting environmental information, and identify which targeted fish populations would benefit from the proposed management actions under this alternative.

***Commercial permit system*:**

The DEIS states that the proposed limited-entry, limited-transferable, special-use commercial permit system and commercial guide permit would result in decreases in commercial fishing pressure which could positively affect abundance and size of targeted finfish species.[29]

EPA recommends the FEIS explain how limiting the transferability of the permit (the distinction between Alternative 2 and 3 commercial permits) gains any increase in abundance and size of any finfish fishery and provide environmental data supporting the anticipated effectiveness of using the proposed limited transferable commercial permit.

EPA recommends the FEIS explain whether there is any difference between the commercial guide permit proposed under Alternative 2 and the one proposed under this alternative and provide environmental data supporting the anticipated comparative effectiveness of using the commercial guide permit as proposed in each alternative.

EPA recommends the FEIS explain how this proposed alternative would likely have a minor, long-term positive impact on targeted fish species, since according to the DEIS most of the commercial fishers target invertebrate species and decreases in the number of commercial fishers would likely have minimal effects on the mean size and abundance of targeted finfish species in the Park.[30] It would be expected that a decrease in commercial fishing pressure could positively affect the abundance and size of targeted invertebrate species but this expectation is absent without explanation from the DEIS.

EPA recommends the FEIS explain how the commitment to implement management actions designed for a 10 percent increase in fishery populations will be achieved should the proposed commercial permit system realize no change, i.e., the "no action" alternative or "maintains the existing fishery status," i.e., Alternative 2.

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[28] P. 56
[29] P. 56
[30] P. 56

***Recreational-user permit system*:**

This alternative discusses the establishment of a recreational-use permit system and the DEIS states its implementation could discourage recreational harvesters of targeted invertebrate species from harvesting in the park, and therefore, realizing a positive impact on the size and abundance of these populations.[31]

EPA recommends the FEIS explain how the proposed recreational-user permit system will realize a positive impact on the size and abundance of targeted invertebrate species populations. In its explanation, the FEIS should address the following DEIS statements: 1) most commercial fishers in the Park target invertebrates,[32] 2) approximately 30 percent of the Park's visitors are recreational fishermen,[33] and 3) the recreational harvest of invertebrates is minor in scale relative to commercial harvest such that any effect of the reduction in recreational effort would likely be small.[34]

Given that since most of the commercial fishers target invertebrates and the impact of recreational invertebrate harvest is minor in scale compared to the commercial invertebrate fishery, the DEIS is unclear how the recreational-use permit system realizes a positive impact on the size and abundance of these populations when compared to the commercial permit system. These issues should be discussed in the FEIS.

Additionally, it is also unclear if a disproportionate burden is being placed on the recreational fisher when the commercial fisher appears to have the greater fishery impacts. And if a disproportionate burdened is indeed being placed on the recreational fisher, the rational for this burden placement is not discussed.

EPA recommends the FEIS discuss whether a disproportionate burden is being placed on the recreational fisher when the commercial fisher appears to have the greater fishery impacts. And if a disproportionate burdened is indeed being placed on the recreational fisher, the rational for this burden placement should be discussed.

Recreational lobster sport season eliminated:

This alternative proposes the elimination of the two-day recreational lobster sport season that proceeds the commercial and recreational lobster season. According to the DEIS the elimination of the two-day recreational lobster sport season would result in a considerable reduction in the amount of lobsters harvested prior to the regular recreational/commercial season; however the eliminated landings would likely be redistributed to commercial and recreational landings "in season.[35]"

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[31] P. 61
[32] P. 56
[33] P. 31
[34] P. 62
[35] P. 61

EPA recommends the FEIS discuss using environmental information whether this conclusion assumes those lobsters that would have been fished during the sport season would definitely be fished during the regular season and provide environmental information to support this assumption.

The elimination of the sport season would appear to diminish the number of days where lobster fishing is allowed facilitating a reduction in the catch. It is unclear whether the number of lobsters typically harvested by recreational fishers during the two-day sport season as compared to the number harvested during the regular season by both commercial and recreational fishers is actually considerable. These issues should be discussed in the FEIS.

EPA recommends the FEIS explain with environmental data how the conclusion that eliminating the sport season would result in a considerable reduction in the number of harvested lobsters prior to the regular season.

EPA recommends the FEIS discuss whether a disproportionate burden is being placed on the recreational fisher when the commercial fisher appears to have the greater fishery impacts. And if a disproportionate burdened is indeed being placed on the recreational fisher, the rational for this burden placement should be discussed.

***Spearfishing limitations*:**

This alternative proposes limiting spearfishing efficiencies by prohibiting spears with trigger mechanisms and the use of SCUBA while engaged in spearfishing. The DEIS notes the Park's existing regulations are less restrictive than in surrounding waters in that spearfishing is prohibited in the neighboring John Pennekamp Coral Reef State Park, in sections of Florida Keys National Marine Sanctuary, and the Everglades National Park.[36]

EPA recommends the FEIS discuss how limiting spearfishing efficiencies would likely increase sizes using environmental information, e.g., indicating how spearfishing impacts the Park's fishery, how common is spearfishing in the Park, what is the average size of their catch, and how would the Park know if reductions in spearfishing achieve the desired goal? How does the Park know whether spearfishing is the problem as opposed to commercial fishery bycatch or guided fishing? Is this the only mechanism being used to address the status of overfished finfish? The DEIS, as written, is unclear what other mechanisms are being used.

***Invertebrate impacts*:**

According to the DEIS despite using different management actions, Alternative 1[37] (no action), Alternative 2 (current status) and Alternative 3 (10 percent improvement),[38] all have the same environmental impacts, i.e., *would not cause impairment, would likely lead to minimal change in mean density or size of individuals of invertebrate populations* upon the Park's

[36] P. 20
[37] P. 61
[38] P. 62

invertebrate species. Yet both Alternative 2 and 3 implement a commercial permit system and Alternative 3 adds the recreational-user permit system, establishes a crab-trap-free zone, and bans the two-day recreational lobster sport season.

EPA recommends the FEIS discuss how implementing alternatives 2 and 3 would realize the same invertebrate impacts as the no action alternative. This finding appears to contradict the DEIS finding that the implementation of a recreational-use permit system could discourage recreational harvesters of targeted invertebrate species from harvesting in the park, and therefore, realizing a positive impact on the size and abundance of these populations.[39] Additionally, it reinforces the concern that recreational users may be disproportionately burdened when implementation of Alternative 3, having the recreational-user permit, does not realize any different impact than Alternatives 1 and 2.

Alternative 4

This alternative commits to offset the effects of increased human population growth, improved fishing technology, and increased recreational bycatch by management actions designed to increase park fishery populations by at least 20 percent over current levels.[40]

***Management actions designed to increase current fishery levels*:**

The DEIS discusses management actions designed to increase park fishery populations by 20 percent for this alternative; however, it is silent as to what these management actions are and does not provide any environmental information supporting their use.

EPA recommends the FEIS discuss what management actions will be used and provide environmental information supporting their use and effectiveness toward achieving the commitment to implement management actions designed to increase park fishery populations by at least 20 percent over current levels.

EPA recommends the FEIS compare the differences between Alternatives 3 and 4 management actions and provide environmental information supporting how they will achieve their respective commitments, e.g., Alternative 3's proposed 10-percent increase in fishery populations versus Alternative 4's proposed 20-percent increase in fishery populations.

EPA recommends the FEIS discuss how the proposed 20-percent increase achieves EO 12962's mandate.

***Impacts of increasing current fishery levels by 20 percent*:**

The DEIS explains the potential environmental impacts of this alternative would lead to increased mean size and abundance of targeted species within the Park relative to other areas

[39] P. 61
[40] P. 56

outside the Park, regardless of trends outside the Park.[41] It is unclear how these impacts would be caused by the proposed management actions designed to increase the Park's existing fishery populations. Additionally it is unclear how Alternative 4's impacts are different than those associated with Alternatives 2 and 3. Environmental data supporting these conclusions appear to be lacking.

EPA recommends the FEIS discuss how these impacts would be caused by the proposed management actions under this alternative and include environmental data supporting these impact conclusions.

It is also unclear how the proposed management actions would likely lead to an appreciable increase of approximately 20 percent in mean density and length of some targeted fish populations for the foreseeable future and would likely have a moderate, long-term positive impact on targeted finfish species.[42]

EPA recommends the FEIS explain how the determination *likely lead to an increase of approximately 20 percent in mean density and length of some targeted fish populations for the foreseeable future and would likely have a minor, long-term positive impact on targeted finfish species* was made, include supporting environmental information, and identify which targeted fish populations would benefit from the proposed management actions under this alternative.

***Commercial permit system*:**

The DEIS states that the abundance and size of targeted invertebrate species would be positively affected by the commercial permit system which would result in decreases in the number of permitted commercial fishers over time due to the "non-transferable" clause and associated decreases in commercial fishing pressure.

EPA recommends the FEIS explain how the "non-transferable" clause of the permit (the distinction between Alternative 3 and 4 commercial permits) gains any increase in abundance and size of any finfish fishery[43] and provide environmental data supporting the anticipated effectiveness of using the proposed limited transferable commercial permit. The explanation should include how long it will take for "drop-in" fishermen numbers to occur.

EPA recommends the FEIS explain how would the non-transferable permit system work? Would it be issued per person, company, or per boat? If a company were to reorganize into a new company, i.e., change the name, would the permit be transferable? If a permit holder (company) were to be purchased by another company, would the permit be transferable? Would a permit holder be able to sell his permit to a third party before the permit expires and would that party be allowed to renew? Will permits be granted to all who apply? If the boat is permitted, then if the boat were "rented" to other for fishing purposes, how would this realize a decrease in number of fishermen? This information is important to the affected fishers and Park users and

[41] P. 56
[42] P. 57
[43] P. 57

their ability to participate in the NEPA process associated with the proposed action. And it is informative in the determination of how long it could take for a "drop in" fishermen to occur.

EPA recommends the FEIS explain any possible unintended environmental consequences to stressed Park fisheries associated with the preferred alternative's commercial permit's non-transferrable clause. One aspect of this issue is whether the universe of permit applicants could be larger than the current universe of fishermen and therefore realizing an increase in fishing pressure to meet the "use" requirements of the permit in order to both obtain and keep the permit? The concern is that the "non-transferable clause" could have the unintended consequence in encouraging more people to apply for permits than otherwise would have, because of the intent to decrease the number of permit holders, and to force "use" as defined in the DEIS when the permit holders otherwise would not have such pressure to fish. Consequently, a permit-induced pressure may occur causing depleted fishing stocks additional fishing pressures that may hinder any and all of the goals represented by Alternatives 2 – 5. The FEIS should address this concern with environmental information to support its conclusions.

EPA recommends the FEIS discuss how this alternative will achieve its commitment to implementing management actions designed for a 20 percent increase in fishery populations but is unclear what management steps will be taken to achieve this should the proposed commercial permit system fail.

EPA recommends the FEIS explain how the commitment to implement management actions designed for a 20 percent increase in fishery populations will be achieved should the proposed commercial permit system realize no change, i.e., the "no action" alternative, "maintains the existing fishery status," i.e., Alternative 2, or increases fishery populations by at least 10 percent, i.e., Alternative 3.

EPA recommends the FEIS explain how this proposed alternative would likely have a minor, long-term positive impact on targeted fish species, since according to the DEIS most of the commercial fishers target invertebrate species and decreases in the number of commercial fishers would likely have minimal effects on the mean size and abundance of targeted finfish species in the Park.[44] It would be expected that a decrease in commercial fishing pressure could positively affect the abundance and size of targeted invertebrate species but this expectation is absent from the DEIS.

Alternative 5

This alternative commits to offset the effects of increased human population growth, improved fishing technology, and increased recreational bycatch by management actions designed to substantially increase park fishery populations to within 20 percent of the historic, pre-exploitive levels.[45]

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[44] P. 56
[45] P. 57

***Management actions designed to increase current fishery levels*:**

The DEIS discusses management actions designed to increase park fishery populations to within 20 percent of historic, pre-exploitive levels; however, it is silent as to what these management actions are and does not provide any environmental information supporting their use. It is also unclear how the differences between the Alternatives 3, 4, and 5 management actions will achieve their respective commitments. Moreover while it is unclear how the proposed 20-percent of historic, pre-exploitive levels complies with EO 12962, EPA agrees that by the nature of Alternative 5's description is likely to meet EO 12962.

EPA recommends the FEIS discuss what management actions will be used and provide environmental information supporting their use and effectiveness toward achieving the commitment to implement management actions designed to increase park fishery populations within 20 percent of historic levels.

EPA recommends the FEIS compare the differences between Alternatives 3, 4, and 5 management actions and provide environmental information supporting how they will achieve their respective commitments, e.g., Alternative 3's proposed 10-percent increase in fishery populations versus Alternative 4's proposed 20-percent increase in fishery populations, and Alternative 5.

***Impacts of increasing current fishery levels within 20 percent of historic levels*:**

The DEIS explains the potential environmental impacts of this alternative would lead to increased mean size and abundance of harvested species within the Park relative to other areas outside the Park if mean size and abundance remained at current levels or declined in areas outside the park and would likely lead to increased mean size and abundance of harvested species in the park relative to areas outside the Park even if mean size and abundance increased outside the Park.[46] It is unclear what this language means and how these impacts would be caused by the proposed management actions designed to increase the Park's existing fishery populations. Additionally it is unclear how Alternative 5's impacts are different than those associated with Alternatives 2, 3, and 4.

EPA recommends the FEIS discuss how these impacts would be caused by the proposed management actions under this alternative, include environmental data supporting these impact conclusions, and describe how they will realize a difference in impacts from those described for the other alternatives.

It is also unclear how the proposed management actions would likely lead to an appreciable increase of approximately 20 percent of historic levels in the mean density and length of some targeted fish populations for the foreseeable future. The DEIS is unclear how this determination was made and does not identify which targeted fish populations would benefit from the proposed management actions. These issues should be discussed in the FEIS.

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[46] P. 58

EPA recommends the FEIS explain how the determination *likely lead to an increase of approximately 20 percent of historic levels in the mean density and length of some targeted fish populations for the foreseeable future* was made, include supporting environmental information, and identify which targeted fish populations would benefit from the proposed management actions under this alternative.

General Observation

Since the DEIS appears to convey numerous unsupported "ifs" in its analysis, it is unclear what the impacts will be. For example in the DEIS discussion of Alternatives 3 & 4, the abundance and size of targeted fish could be positively affected *if* the recreational use permit system resulted in decreased fishing effort. Similarly in Alternative 4, *if* the non-transferable commercial-use permit system results in decreased fishing effort in the Park, then size and abundance of targeted species could increase. Also, *if* the commercial guide permit system resulted in decreased fishing effort in the park, then size and abundance of targeted species could increase. While mentioned here, in the Alternative 5 analysis, this observation is not unique to Alternative 5.

EPA recommends the FEIS provide more concrete analysis supported with environmental information in lieu of the DEIS' "if" analysis.

The DEIS indicates Alternative 5 would likely lead to an increase in mean density or length of harvested finfish populations and lead to an appreciable improvement in mean density or length of some (but does not identify which ones) harvested fish populations for the foreseeable future and therefore would likely have a major, long-term beneficial impact on targeted fish species and would not cause impairment.[47]

EPA recommends the FEIS explain its statement: [p]*otential substantial increases to the minimum size limits for recreationally-targeted species might reduce the levels of recreational harvest for some targeted invertebrate species*,[48] in context of the apparently conflicting statement, [n]*evertheless, since recreational harvest of invertebrates is minor in scale relative to commercial harvest, any effect of the reduction in recreational effort would likely be small.*[49]"

EPA recommends the FEIS explain its conclusion using environmental information that Alternative 5 would likely lead to slight increases for the foreseeable future in mean density or size of individuals of invertebrate populations and would likely have a minor, long term impact on targeted invertebrates and not cause impairment[50] because as written, it appears to be a stand alone, unsubstantiated conclusory statement.

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[47] P. 59
[48] P. 63
[49] P. 62 & 63
[50] P. 64

***Spearfishing prohibition*:**

This alternative prohibits spearfishing without explaining how this prohibition would positively affect the abundance of targeted fisheries. The DEIS states that the abundance of harvested finfish species would be positively affected by the prohibition of spearfishing within the Park which could result in fewer fish harvested from the park.[51]

EPA recommends the FEIS discuss how the spearfishing prohibition would positively affect abundance of targeted of targeted species. For example, how many "primitive" spear fishers fish in the Park and what is the degree of their impact to Park fisheries? The discussion should provide environmental information to describe primitive spearfishing's impact to the abundance and size of targeted finfish species, and consequently, making clear the corresponding positive impacts associated with its reduction.

While the elimination of spearfishing as proposed by Alternative 5 may be an effective fishery management measure, the DEIS is unclear as written whether it is necessary to fishery recovery[52] when compared to the spearfishing limitations proposed under Alternatives 3 and 4. The Alternative 3 and 4 spearfishing limitations, without more substantive environmental information, combined with other limitations, e.g., the spearing of large specimens like grouper in deeper waters, restriction to "abundant" species (as determined by the appropriate resource agencies and Park staff) instead of overfished species, and the designation and enforcement of minimum size and bag restrictions. Furthermore, size restrictions may need to be increased while per-day bag limits decreased.

No trawl zones:

This alternative proposes a no-trawling zone within the Bay and states that such a zone could be expected to have beneficial direct and indirect effects on targeted finfish by reducing early mortality bycatch, damage to sea grasses, macro algae, and sponges (critical food source removal).[53]

EPA recommends the FEIS clarify the above statement because as written it appears misleading because Chapter 2's description of Alternative 5 does not appear to include a no-trawling area. It only provides for the "consideration of a no trawl zone prohibiting commercial shrimp trawling."[54] Therefore, no beneficial impacts would be expected to result from the consideration of a prohibition.

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[51] P. 57

[52] From a safety perspective, however, there are benefits to eliminating spearfishing since it is a potentially dangerous sport (spear shooting, use conflicts with snorkelers, etc.) and can also be a shark attractant due to blood releases and dispersion in the water column.

[53] P. 58

[54] P. 27

Purpose and Need Analysis

The alternatives presented and evaluated appear to represent an escalation of fishery management measures for commercial and recreational fishery restrictions that primarily target the invertebrates. For example, the DEIS states that most "commercial fishers in the park target invertebrates (spiny lobsters, blue and stone crabs, and shrimp), decreases in the number of commercial fishers would likely have minimal effects on the mean size and abundance of targeted fish species in the park."[55] However alternatives 2, 3, 4, and 5 implement a commercial permit system, the details of which are omitted from the DEIS, leading EPA to assume that the purpose of the commercial permit is to reduce the number of commercial fishers.

Since the preferred alternative implements a commercial permit system containing a non-transferable clause, "which would result in decreases in the number of permitted commercial fishers over time due to the "non-transferable clause," and related decreases in commercial fishing pressure" which would positively effect the abundance and size of targeted fish species.[56] Consequently it is unclear how the finfish species identified as being *overfished* as defined by MSFCMA, approaching an *overfished* status, or qualified to be considered as *overfished* will be addressed to meet the proposed action's purpose and need.

EPA recommends the FEIS clarify how the proposed alternatives will benefit these *overfished*, approaching *overfished* status, or qualified to be considered as *overfished* finfish species. For example, the DEIS is unclear whether the preferred alternative's "non-transferable clause" in its commercial permit system will timely realize protections to these finfish (i.e., groupers and snappers).

Of concern are those finfish where large specimens have been selectively extracted[57] such that mature, large and fecund females are no longer providing their significant contribution to recruitment. According to the DEIS, at least 14 fishery species[58] are being harvested at a size before they average sexual maturity (size of first maturity), so that these species cannot sustain their population. Over the past 25 years, the average size landed was near the minimum size for all harvested species. According to the DEIS, the average black grouper is now 40 percent of its 1940 measurements and its spawning stock appears to be less than 5 percent of its historical maximum. These are clear indicators that current harvesting levels are not sustainable for these species. The DEIS, as written is unclear and lacks environmental information demonstrating whether its preferred alternative will provide for species sustainability.

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[55] P. 56
[56] P. 57
[57] P. 30
[58] P. vi.

Other Comments

Environmental Justice

EPA recommends the FEIS should address the societal/economic impacts to commercial fishers, especially if there are any fishers from minority and/or low-income populations since reductions in commercial fishing are expected. The FEIS should include appropriate information regarding the number of minority and low-income fishery dependent populations. The proposed recreational permit fee may detrimentally impact subsistence fishers. Consequently, the FEIS should discuss the demographics of the commercial or subsistence fishers using the Park, their numbers, and what mitigation might be offered or is locally available (e.g., Park employment) to help offset these societal impacts.

Sustainable Use

EPA recommends the FEIS explain how the proposed minimum increases in fishery abundance and size relate to sustainability. Although the proposed percentage increases in the Park's fishery would be helpful to recovery, it is unclear how the proposed minimum 10 percent (Alternative 3) and minimum 20 percent (Alternative 4) increases in fishery abundance and size or the restoration to within 20 percent of the Park's historic, pre-exploited levels (Alternative 5) relate to sustainability. Moreover, it is unclear if overfishing or full exploitation would indeed be resolved by any of these proposed percentage increases.

EPA recommends since the DEIS does not explain what percent increase in fishery abundance and size would constitute an adequate stock for a sustainable level of harvest, the appropriate resource agencies and Park staff determine that a level and designate it as the preferred alternative for the FEIS and implement management actions in an FMP to achieve that level. Alternatively, the Park could set a fishery recovery percentage at a level beyond sustainability to enhance the Park experience.

Commitments and FMP Specifics

EPA recommends the FEIS should fully describe the measures to be implemented and provide more certainty as to what measures will be, or will likely be, implemented. Several potential management measures were provided for Alternatives 2[59], 3[60], 4[61] and 5[62] the Park and FWC would consider. EPA considers such detail essential to the FMP/DEIS. For example in Alternatives 3-5, how would the management options of harvest-size increases, bag-limit decreases, commercial fishermen number decreases, and seasonal or spatial closures,

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[59] P. 17
[60] P. 20
[61] P. 24
[62] P. 26

e.g., species-specific spawning closures or marine reserve areas be implemented for each alternative?

The prospective record of decision (ROD) should state this with even more certainty and detail. To the extent feasible, commitments should be made in the ROD (preferably the FEIS) to the effect that these measures will be implemented to reach the recovery goals of each alternative presented (particularly for the preferred alternative). Moreover, the monitoring, performance measures and enforcement of the fishery management measures of the selected FMP should be further discussed in more detail in the FEIS and ROD.